

- 22 -

WHAT IS CLAIMED IS:

Fig A17
1. An anti-theft vehicle system for a vehicle wheel having a rotational axis comprising:

5 a signal generator to generate a first predetermined signal around a first predetermined perimeter and to generate a second predetermined signal around a second predetermined perimeter at least partially disposed within the first predetermined perimeter;

10 at least one inhibitor disposed within the vehicle wheel to selectively engage and disengage the vehicle wheel to resist and allow rotational movement of the vehicle wheel about the rotational axis;

15 a rotatable structure disposed within the vehicle wheel and cooperating with said at least one inhibitor for moving said at least one inhibitor between an engaged position and a disengaged position with respect to the vehicle wheel; and

20 a receiver mounted within the vehicle wheel to receive the first predetermined signal and second predetermined signal to activate said rotatable structure to move said at least one inhibitor between said engaged position and said disengaged position.

25 2. An anti-theft vehicle system as set forth in claim 1 including a first buried wire cable for transmitting the first predetermined signal.

30 3. An anti-theft vehicle system as set forth in claim 2 including a second buried wire cable for transmitting the second predetermined signal.

23

- 23 -

4. An anti-theft vehicle system as set forth in claim 3 including a shielding material for insulating a portion of said second buried wire cable from said first buried wire cable.

5

5. An anti-theft vehicle system as set forth in claim 3 wherein said signal generator includes an amplifier and a potentiometer for controlling the level of signal output by said amplifier.

10

6. An anti-theft vehicle system as set forth in claim 5 wherein said first buried wire cable includes a plurality of branches connected to said amplifier.

15

7. An anti-theft vehicle system for a vehicle wheel having a rotational axis comprising:

20

at least one inhibitor disposed within the vehicle wheel to selectively engage and disengage the vehicle wheel to resist and allow rotational movement of the vehicle wheel about the rotational axis;

25

rotatable means disposed within the vehicle wheel and cooperating with said at least one inhibitor for moving said at least one inhibitor between an engaged position and a disengaged position with respect to the vehicle wheel;

30

a transmitting circuit for generating a first predetermined signal defining a first predetermined spatial perimeter and for generating a second predetermined signal defining a second predetermined spatial perimeter at least partially disposed within the first predetermined spatial perimeter; and

24

- 24 -

a receiving circuit disposed within the vehicle wheel for receiving the first predetermined signal and second predetermined signal to activate said rotatable means to move said at least one inhibitor between said engaged position and said disengaged position when the vehicle wheel passes the predetermined spatial perimeter.

8. An anti-theft vehicle system as set forth in claim 7 wherein said transmitting circuit includes an oscillator to create at least one carrier frequency.

9. An anti-theft vehicle system as set forth in claim 8 wherein said oscillator creates the at least one carrier frequency at a frequency less than nine kilohertz.

10. An anti-theft vehicle system as set forth in claim 7 wherein said transmitting circuit includes at least one antenna of electrically conductive material to transmit the first predetermined signal along and define the first predetermined spatial perimeter.

11. An anti-theft vehicle system as set forth in claim 7 wherein said transmitting circuit includes a remotely transportable transmitter for transmitting the second predetermined signal to move said at least one inhibitor between said engaged position and disengaged position.

25

- 25 -

12. An anti-theft vehicle system a set forth in claim 7 wherein said transmitting circuit includes a low pass filter to eliminate carrier harmonics of the predetermined signal.

5

13. An anti-theft vehicle system as set forth in claim 7 wherein said transmitting circuit includes an amplifier and a potentiometer for controlling the level of signal output by said amplifier.

10

14. An anti-theft vehicle system for a vehicle comprising:

a transmitter to generate a predetermined signal around a predetermined spatial perimeter;

15 a plurality of antennas connected to said transmitter to transmit the predetermined signal along and define the predetermined spatial perimeter;

at least one vehicle wheel;

20 at least one inhibitor disposed within the at least one vehicle wheel to selectively engage and disengage the at least one vehicle wheel to resist and allow rotational movement of the at least one vehicle wheel;

25 a rotatable structure disposed within the at least one vehicle wheel and cooperating with said at least one inhibitor for moving said at least one inhibitor between an engaged position and a disengaged position with respect to the at least one vehicle wheel; and

30 a receiving circuit disposed within the at least one vehicle wheel to receive the predetermined

26

- 26 -

signal to activate said rotatable structure to move said at least one inhibitor between said engaged position and said disengaged position.

5 15. An anti-theft vehicle system as set forth in claim 14 wherein said receiving circuit includes a resonant tank circuit to eliminate reception by said receiving circuit of all frequencies other than frequencies of the predetermined signal.

10 16. An anti-theft vehicle system as set forth in claim 15 wherein said receiving circuit includes a detector electrically connected to said resonant tank circuit to receive the predetermined signal.

15 17. An anti-theft vehicle system as set forth in claim 16 wherein said receiving circuit includes a gain stage circuit electrically connected to said detector to amplify the predetermined signal after the predetermined signal has been received and detected.

20 18. An anti-theft vehicle system as set forth in claim 14 wherein said transmitter includes an amplifier.

25 19. An anti-theft vehicle system as set forth in claim 14 wherein said transmitter includes a remotely transportable transmitter for transmitting the signal to move said at least one inhibitor between said engaged position and disengaged position.

- 27 -

20. An anti-theft vehicle system as set forth in claim 14 including a low pass filter to eliminate carrier harmonics of the predetermined signal.

28